

**Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services**

**STATEMENT OF BASIS**

**Devon Energy Production Co LP  
Main Pass 68 G Facility  
Venice, Plaquemines Parish, Louisiana  
Agency Interest Number: 32696  
Activity Number: PER20090001  
Proposed Permit Number: 2240-00264-V3**

**I. APPLICANT**

**Company:**

Devon Energy Production Co LP  
400 E Kaliste Saloom Rd Ste 2500  
Lafayette, Louisiana 70508

**Facility:**

Main Pass 68 G Facility  
Territory Seas 20 Mi E of  
Venice, Plaquemines Parish, Louisiana  
Approximate UTM coordinates are 302.00 kilometers East and 3237.00 kilometers  
North, Zone 16

**II. FACILITY AND CURRENT PERMIT STATUS**

The Main Pass 68G Facility is an offshore oil and gas platform. Production streams are separated into oil, water and natural gas and then routed to appropriate pipelines.

Main Pass 68 G Facility is a designated Part 70 source. There are no other Devon Energy facilities contiguous to the Main Pass 68G facility.

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### **III. PROPOSED PROJECT/PERMIT INFORMATION**

#### **Application**

A permit application and Emission Inventory Questionnaire were submitted by Devon Energy Production Co LP on March 9, 2009 requesting a Part 70 operating permit. Additional information dated October 29, 2009 was also received.

#### **Project**

Devon Energy Production Co LP requested a Part 70 operating permit renewal/modification for the facility. In this renewal/modification the company proposes the following:

- add two gas operated chemical injection pumps (Sources CI-03 and CI-04)
- add two gas operated diaphragm pumps (Sources DP-05 and DP-06)
- delete the gas operated level controllers (Source LC-04)
- delete the gas operated pressure controllers (Source PC-01)
- add a vent scrubber blowcase (Source BC-01)

Devon also requested that pump engines 02 and 03 be deleted, however, these out of service pump engines were removed in previous permitting activity.

Emissions from the facility were recalculated to reflect updated emissions factors and actual operating conditions for the following:

- Cooper Bessemer Compressor Engines (Source CE-01)
- Caterpillar G3606 Compressor Engines (Source CE-02)
- Diesel Crane Engine (Source DC-01)
- Gas Operated Chemical Pumps (Sources CI-01 and CI-02)
- Gas Operated Diaphragm Pumps (Sources DP-01, DP-02, DP-03, and DP-04)
- Gas Operated Level Controllers (Sources LC-01, LC-02, and LC-03)
- Gas Operated Pressure Controllers PC-02
- Generator Engine GE-01
- Facility Fugitives FE-01

#### **Proposed Permit**

Permit 2240-00264-V3 will be the renewal/modification of Part 70 operating permit 2240-00264-V2 for the Devon Energy Production Co LP Main Pass 68G Facility.

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**Permitted Air Emissions**

Estimated emissions in tons per year are as follows:

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
PM <sub>10</sub>	0.06	2.52	2.46
SO <sub>2</sub>	0.12	0.11	-0.01
NO <sub>x</sub>	206.32	182.86	-23.46
CO	104.29	55.72	-48.57
VOC *	21.83	20.18	-1.65

**IV REGULATORY ANALYSIS**

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

**Applicability and Exemptions of Selected Subject Items**

ID No:	Requirement	Notes
UNF001	LAC 33:III.2115 Waste Gas Disposal	<b>EXEMPT.</b> Total VOC emissions < 100 TPY [LAC 33:III.2115.H.1.a]
	LAC 33:III. Chapter 59 - Chemical Accident Prevention and Minimization of Consequences	<b>DOES NOT APPLY.</b> Facility does not store or process any referenced listed substance greater than the threshold amounts. [LAC 33:III.5901]
	Compliance Assurance Monitoring 40 CFR 64	<b>DOES NOT APPLY.</b> PSEUs at the Facility do not have an add-on control device to achieve compliance with an emission standard. [40 CFR 64.2 - Applicability]

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ID No:	Requirement	Notes
UNF001 (cont'd)	Chemical Accident Prevention Provisions 40 CFR 68	<b>DOES NOT APPLY.</b> Facility does not store or process any referenced listed substance greater than the threshold amounts. [40 CFR 68]
	40 CFR Part 60 - Subpart LLL - Standards of Performance for Onshore Natural Gas Processing; SO2 Emissions	<b>DOES NOT APPLY.</b> Facility is not an onshore natural gas processing plant. [40 CFR 60.640(c)]
CE-01 CE-02 DC-01 GE-01	LAC 33:III.1502. Emission Standards for Sulfur Dioxide. Applicability	<b>DOES NOT APPLY.</b> Source's potential to emit SO <sub>2</sub> emissions is < 5 tons/year.
CE-01 CE-02	40 CFR 60 Subpart JJJJ-Standards of Performance for Stationary Spark Ignition Internal Combustion Engines-	<b>DOES NOT APPLY.</b> The compressor engines were manufactured prior to June 12, 2006 and have not been modified or reconstructed after June 12, 2006. [40 CFR 60.4230]
	40 CFR 63 Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	<b>DOES NOT APPLY.</b> The compressor engines were manufactured prior to June 12, 2006 and have not been modified or reconstructed after June 12, 2006. A stationary RICE which is an ...existing spark ignition 2 stroke lean burn (2SLB) stationary RICE, an existing spark ignition 4 stroke lean burn (4SLB) stationary RICE, ... does not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary. 40 CFR 63.6590(b)(3)

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ID No:	Requirement	Notes
DC-01	40 CFR 60 Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines-	<b>DOES NOT APPLY.</b> The diesel engine was manufactured prior to July 11, 2005 and has not been modified or reconstructed after July 11, 2005. [40 CFR 60.4230]
	40 CFR 63 Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	<b>DOES NOT APPLY.</b> The diesel engine was manufactured prior to June 12, 2006 and has not been modified or reconstructed after June 12, 2006. A stationary RICE which is an ...existing spark ignition 2 stroke lean burn (2SLB) stationary RICE, an existing spark ignition 4 stroke lean burn (4SLB) stationary RICE, ... does not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary. [40 CFR 63.6590(b)(3)]
FUG001	LAC 33:III.2121-Fugitive Emission Control	<b>DOES NOT APPLY.</b> Facility is not a natural gas processing plant. [LAC 33:III.2121.A]
	40 CFR 60 Subpart KKK—Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	<b>DOES NOT APPLY.</b> Facility is not an onshore natural gas processing plant. [40 CFR 60.630 (a)(1)]

**Prevention of Significant Deterioration/Nonattainment Review**

The changes in this modification/renewal did not trigger PSD/Nonattainment Review.

**Streamlined Equipment Leak Monitoring Program**

None

**MACT Requirements**

Devon's Main Pass 68G facility is an area source of HAPs pursuant to 40 CFR 63 Subpart ZZZZ. As such, the modified generator EQT004/GE-01 must comply with

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40 CFR 63 Subpart ZZZZ by complying with applicable requirements of 40 CFR 60 Subpart JJJJ. The other engines at the facility are existing and are exempt from 40 CFR 63 Subpart ZZZZ per 40 CFR 63.6590(b)(3).

**Air Quality Analysis**

None

**General Condition XVII Activities**

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

**Insignificant Activities**

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

**V. PERMIT SHIELD**

None

**VI. PERIODIC MONITORING**

To demonstrate continuous compliance with the permit limits and standards, emissions from the compressor engines are monitored using a semi-annual preventative maintenance analysis. Emissions from the generator engine are monitored as required by 40 CFR 60 Subpart JJJJ.

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**VII. GLOSSARY**

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Condensate (lease condensate) – A natural gas liquid recovered from associated and nonassociated gas wells from lease separators or field facilities, reported in barrels of 42 U.S. gallons at atmospheric pressure and 60 degrees Fahrenheit

Crude oil – A mixture of hydrocarbons that exists in liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Depending upon the characteristics of the crude stream, it may also include:

1. Small amounts of hydrocarbons that exist in gaseous phase in natural underground reservoirs but are liquid at atmospheric pressure after being recovered from oil well (casinghead) gas in lease separators and are subsequently commingled with the crude stream without being separately measured. Lease condensate recovered as a liquid from natural gas wells in lease or field separation facilities and later mixed into the crude stream is also included;
2. Small amounts of nonhydrocarbons produced with the oil, such as sulfur and various metals;
3. Drip gases, and liquid hydrocarbons produced from tar sands, oil sands, gilsonite, and oil shale.

Liquids produced at natural gas processing plants are excluded. (counted separately as a type) Crude oil is refined to produce a wide array of petroleum products, including heating oils; gasoline, diesel and jet fuels; lubricants; asphalt; ethane, propane, and butane; and many other products used for their energy or chemical content.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H<sub>2</sub>S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

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Natural Gas Processing Plant – Facilities designed to recover natural gas liquids from a stream of natural gas that may or may not have passed through lease separators and/or field separation facilities. These facilities control the quality of the natural gas to be marketed. Cycling plants are classified as gas processing plants. [Cycling (natural gas): The practice of producing natural gas for the extraction of natural gas liquids, returning the dry residue to the producing reservoir to maintain reservoir pressure and increase the ultimate recovery of natural gas liquids. The reinjected gas is produced for disposition after cycling operations are completed.]

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C (“Prevention of Significant Deterioration of Air Quality”) and D (“Nonattainment New Source Review”).

Nitrogen Oxides (NO<sub>x</sub>) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH<sub>4</sub>), Ethane (C<sub>2</sub>H<sub>6</sub>), Carbon Disulfide (CS<sub>2</sub>)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit:  $\geq 10$  tons per year of any toxic air pollutant;  $\geq 25$  tons of total toxic air pollutants; and  $\geq 100$  tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM<sub>10</sub> – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.



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Sulfur Dioxide (SO<sub>2</sub>) – An oxide of sulfur.

Sulfuric Acid (H<sub>2</sub>SO<sub>4</sub>) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.